#### **U.S. Department of Commerce**

National Institute of Standards and Technology Gaithersburg, MD 20899

Certificate Number: 98-060A1

Page 1 of 3

# National Type Evaluation Program

## Certificate of Conformance

for Weighing and Measuring Devices

For:

Belt-Conveyor Scale Load Cell Electronic Model: MMI-2 Family

Scale Capacity: 34 tph to 3371 tph

(See Table on Page 2)

**Submitted by:** 

Milltronics Incorporated 709 Stadium Drive East Arlington, TX 76011 Tel: (817) 277-3543 Fax: (817) 277-3894

Contact: Ken Knapp

### **Standard Features and Options**

Model designation: MMI-2-YY, where YY designates the width of the belt in inches.

See Page 2 for specific models, capacities, belt loading, and belt width parameters.

Number of idlers: 2

Weighbridge length: 72" to 120"

Master weight totalizer: Compuscale III Automatic zero setting mechanism

Low-flow lockout

Belt Speeds: Minimum 72.5 feet per minute

Maximum 725 feet per minute

Load cell: Sensortronics Model 60048-XXX-0138, or

Sensortronics Model 60048-XXX-0139

Temperature Range:  $-10~^{\circ}\text{C}$  to  $40~^{\circ}\text{C}$  ( $14~^{\circ}\text{F}$  to  $104~^{\circ}\text{F}$ )

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: March 1, 1999

Gilbert M. Ugiansky, Ph.D. Chief, Office of Weights and Measures Issue Date: March 17, 1999

**Note:** The National Institute of Standards and Technology does not "approve," "recommend," or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product by the Institute. (See NTEP Policy and Procedures.)

Certificate Number: 98-060A1

Page 2 of 3

#### Milltronics Incorporated Belt-Conveyor Scale Model: MMI-2 Family

#### **Specific Model Designations and Parameters:**

Model	Belt Load	Belt Loading (lb/ft)		ity (tph)	Belt
	Min	Max	Min	Max	Width (inches)
MMI-2-72	15.5	155	34	3371	72
MMI-2-60	15.5	155	34	3371	60
MMI-2-54	15.5	155	34	3371	54
MMI-2-48	15.5	155	34	3371	48
MMI-2-42	15.5	147	34	3197	42
MMI-2-36	15.5	106	34	2305	36
MMI-2-30	15.5	72	34	1566	30
MMI-2-24	15.5	44	34	957	24
MMI-2-18	15.5	25	34	543	18

**Application:** Weighing of bulk materials.

**Identification:** An identification plate containing the name of the manufacturer, model number, serial number, rated minimum and maximum capacity in tons per hour, the belt speed in terms of feet per minute, and the maximum load in terms of pounds per foot is permanently attached to the weighing element.

<u>Sealing:</u> The sealable parameters are located in the master weight totalizer (integrator). Dip switch SW1, contact six (SW1-6), must be switched to the off position for the unit to operate in HB44 mode. In this mode, the calibration and configuration parameter values may not be changed. This can be verified by attempting to initiate the "span" function at which point the indicator will display "CALIBRATION LOCKOUT" if SW1 is in the off position. Additionally, the maximum deviation of the value of zero is limited to  $\pm$  2% of the span. A wire security seal can be threaded through the locking hasp on the integrator door to prevent undetected access to the SW1 dip switch.

<u>Test Conditions:</u> This Certificate supersedes Certificate of Conformance Number 98-060 and is issued without additional testing to correct the capacities covered by the Certificate and modify the model numbering scheme. The test conditions for Certificate of Conformance 98-060 are listed below for reference.

<u>Certificate of Conformance 98-060:</u> <u>Field Test:</u> The emphasis of the field evaluation was on the system design and operation. A material test was conducted on the Model MMI-2-36-250 belt-conveyor scale. The scale was retested after a six-month period.

<u>Laboratory Test:</u> The emphasis of the evaluation was on the system design and operation. The system consisted of a Model Compuscale III master weight totalizer and a Model MMI-2-36-250 weighbridge. The scale capacity was 1550 tph maximum and 825 tph minimum. The belt loading capacity was 94 lb per foot maximum and 50-lb per foot minimum. The length of the weighbridge was 96". Milltronics Part Number 23900167 load cells were used (not evaluated separately by NTEP). Static and dynamic tests were conducted at test loads ranging from 35% to 98% of the static scale capacity and over a temperature range of

Certificate Number: 98-060A1

Page 3 of 3

#### Milltronics Incorporated Belt-Conveyor Scale Model: MMI-2 Family

### <u>Certificate of Conformance Number 98-060 (Continued):</u>

-10 °C to 40 °C. Power voltage tests of 100 VAC to 130 VAC were conducted at 20 °C.

The results of the evaluations indicate that the device complies with the applicable requirements of NIST Handbook 44

Type Evaluation Criteria Used: NIST Handbook 44, 1998 Edition

**Tested By:** C. V. Cotsoradis (MD) and L. Turberville (AL)

**Information Reviewed By:** T. Ahrens (NIST)